

Title (en)
EFFICIENTLY GENERATING SELECTABLE ANTENNA POLARIZATION

Title (de)
EFFIZIENTE ERZEUGUNG VON SELEKTIERBARER ANTENNENPOLARISATION

Title (fr)
PRODUCTION EFFICACE D'UNE POLARISATION D'ANTENNE SELECTIONNABLE

Publication
EP 1329001 B1 20050817 (EN)

Application
EP 01979988 A 20011010

Priority
• US 0142633 W 20011010
• US 68736100 A 20001013

Abstract (en)
[origin: US6262690B1] An antenna system (10) capable of transmitting electromagnetic radiation using the technique of combining two quadrature signals for either right hand circular polarization or left hand circular polarization using a circularly polarized antenna (30), or alternately, either horizontal or vertical polarization using a linearly polarized antenna (36) while incorporating feedback for automatically correcting for amplitude and phase variations in the quadrature paths using a switch (12) which selects the sense of the polarization and electronic optimization of the transmit antenna (30, 36). The antenna system includes a control circuit having a polarization switch (12) for receiving a transmission signal. The switch (12) generates first and second output signals which are substantially similar to the transmission signal, and determines whether to apply the transmission signal to one of a first or a second switch output. A coupler (14) receives the first and second switch outputs and generates first and second output signals having a predetermined phase difference. A variable detector (16, 18) detects and adjusts a relative amplitude and phase of the respective first and second output signals. An error correction circuit (34) determines an adjustment to the variable phase detector to vary the phase and amplitude of the first and second output signals in accordance with the relative amplitude and phase of the respective first and second output signals.

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